

The Claims

1. (Withdrawn)

2. (Withdrawn)

3. (Withdrawn)

4. (Original) A wire steered scalpel for enlarging catheter entry sites wherein a guide wire has been inserted preparatory to introducing a catheter, said scalpel comprising:

a housing comprising a pathway having an entry portal and an exit portal through which the guide wire is threadably disposed to facilitate steering the housing to the entry site, the entry portal being proximal to the entry site when the scalpel is used;

a split scalpel blade having a pair of sharpened points, said blade being within the housing and aligned with the pathway to lance, at the entry site, to be extended from the housing and thereby produce an incision having a predetermined width and depth; and

an actuator comprising a plurality of blade interfacing parts by which the scalpel blade is manually displaced relative to the housing and pathway to cause the blade to lance.

5. (Original) A wire steered scalpel according to Claim 4 wherein the scalpel blade is medially split to comprise two scalpel components aligned to provide a distally disposed piercing end and a proximally disposed end whereat the two components comprise a common hinge connection.

6. (Original) A wire steered scalpel according to Claim 5 wherein the housing comprises stops and the blade comprises guide edges which interface to the actuator parts and side stops to maintain the scalpel components aligned until the scalpel pierces the entry site to the predetermined depth.

7. (Original) A wire steered scalpel according to Claim 4 wherein the housing comprises at least one stop for limiting travel of the scalpel blade components, thereby limiting depth of the lance and ending a first lancing motion of the scalpel.

8. (Original) A wire steered scalpel according to Claim 4 wherein the guide edges of the blade comprise relief for the side stops when the scalpel blade reaches the at least one blade travel limiting stop, thereby permitting the components to be displaced transversely relative to direction of displacement of the actuator, thereby widening the incision as a second motion of the scalpel blade.

9. (Original) A wire steered scalpel according to Claim 4 wherein the blade comprises at least one distally disposed wing which comprises an edge which interfaces with the at least one stop, the interfacing edge having a curvature which substantially maintains a constant depth of incision as each blade component is transversely displaced.

10. (Original) A wire steered scalpel according to Claim 4 wherein said housing in cooperation with said actuator define selectable stops whereby actuator travel is limited and, as a result, transverse displacement of the components is limited to selectively control and limit width of an incision.

11. (Original) A wire steered scalpel according to Claim 4 wherein said housing comprises a top part and a bottom part.

12. (Original) A wire steered scalpel according to Claim 11 wherein said top and bottom parts are molded as a single unit wherein said parts comprise a common living hinge which permits the parts to close together as a clam shell.

13. (Original) A wire steered scalpel according to Claim 12 wherein said scalpel blade comprises a medially depressed channel into which a guide wire is displaced preparatory to closing the top and bottom parts together.

14. (Original) A wire steered scalpel according to Claim 12 wherein said actuator parts comprise latches which act against the scalpel blade to secure the blade to a part of the housing while the housing is open.

15. (Original) A wire steered scalpel according to Claim 4 wherein said housing comprises an adjustable distally disposed nose part comprising a distal face which is adjustable along a longitudinal medial line to selectably limit scalpel blade displacement distally beyond the distal face and thereby limit depth of penetration of the blade.

16. (Original) A wire steered scalpel according to Claim 4 wherein said housing comprises an enclosed pathway for a guide wire threaded there through, said pathway having a distal opening and a proximal opening whereby the scalpel is displaced along the guide wire to an incision site.

17. (Original) A wire steered scalpel according to Claim 16 wherein said housing comprises a pathway offset to provide a point of coincidence between the guide wire and the sharpened point of a fully extended scalpel blade.

18. (Original) A wire steered scalpel according to Claim 4 wherein said actuator comprises a plurality of hingeably interconnected parts, including a manual interface component, which cooperate to provide a mechanical advantage whereby linear displacement of the scalpel blade is greater than manual displacement of the interface component.

19. (Original) A wire steered scalpel according to Claim 18 wherein said actuator parts are molded as a single part comprising living hinges therewith molded.

20. (Original) A wire steered scalpel according to Claim 18 wherein said actuator comprises a living hinge connection produced by integrally molding at least one housing part with the actuator.

21. (Original) A wire steered scalpel according to Claim 18 further comprising a spring affixed on a first end to the housing and to actuator on a second whereby the blade is automatically returned into the housing after use as a safety feature.

22. (Withdrawn)

23. (Withdrawn)

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25. (Withdrawn)

26. (Withdrawn)

27. (Withdrawn)

28. (Withdrawn)

29. (Withdrawn)

30. (New) A method for making a carefully controlled incision at a catheter entry site, wherein a guide wire has been inserted preparatory to introducing a catheter, comprising the steps of:

(a) providing a guide-wire steered scalpel, said scalpel comprising:

a housing comprising a pathway having an entry portal and an exit portal through which a guide-wire is threadably disposed to facilitate steering the housing to the entry site, the entry portal adjoining the entry site when the scalpel is used;

a split scalpel blade, having two sharpened blades and associated points, which is disposed within the housing and aligned with the pathway to lance at the entry site, said blade being extended from the housing to thereby produce an incision having a predetermined width and depth; and

an actuator comprising at least one blade interfacing part by which the scalpel blade is manually displaced relative to the housing and pathway to cause the blade to lance;

(b) displacing a guide-wire which has been previously inserted into an entry site through the entry and exit portals, respectively;

(c) displacing the housing along the guide-wire to the entry site; and

(d) actuating the scalpel blade to pierce the entry site to a predetermined depth and to a predetermined width.

31. A method according to Claim 30 wherein step d comprises two separate steps as follows:

(e) extending the scalpel blade from the housing to produce an incision to the predetermined depth; and

(f) a second mode whereby the scalpel blade is split apart to widen the incision to a predetermined width.

32. (New) A method according to Claim 31 wherein transition from the first mode to the second mode is continuous and subliminal to a user actuating the scalpel.

33. (New) A method according to Claim 30 comprising a further step of retracting the scalpel blade into the housing at the end of the actuating step.

34. (New) A method according to Claim 33 wherein the actuating step comprises a step which stores energy in an elastic memory device.

35. (New) A method according to Claim 34 comprising an additional step of automatically retracting the scalpel blade into the housing due to release of energy stored in the elastic memory device at the end of the actuating step.

36. (New) A method according to Claim 33 wherein the scalpel blade retracting step comprises the following steps:

(g) returning the two scalpel blades to an original juxtaposed state; and

(h) retracting the entire scalpel blade into the housing.

37. (New) A method according to Claim 36 wherein step h occurs following completion of step g.